

[FLIP CHIP LIGHT-EMITTING DIODE PACKAGE]

Abstract

A flip chip light-emitting diode package comprising a Schottky diode group, a light-emitting diode and a plurality of bumps is provided. The Schottky diode group comprises a plurality of Schottky diodes electrically coupled in series or in parallel. The bumps are disposed between one of the Schottky diodes and the light-emitting diode so that the Schottky diode group and the light-emitting diode are connected reverse and in parallel. The light-emitting diode is disposed on one of the Schottky diodes and connected together by a flip-chip bonding process. The flip chip light-emitting diode package prevents damaging from electrostatic discharge and promotes light extraction efficiency. In addition, the submount of the Schottky diode is fabricated by using silicon material. Since silicon is an excellent material for heat dissipating, light extraction efficiency and reliability of the package is increased.